Screencast: 09-filesystem-hierarchy.webm or 09-filesystem-hierarchy.mp4

References:
UaLSAH REFERENCE - Chapter 6 - The Filesystem
TLCL - Chapter 3, Guided Tour

Unix tries to make everything a file:

Processes are a file (/proc/###)
Devices are a file (/dev/sda1)

A description and comparison to where Microsoft Windows stores things and where Mac OS X stores things may be helpful.

Linux filesystem hierarchy (UaLSAH pg 145 - 147 also man hier)

/bin
Most rudimentary binaries

/boot
Kernel, driver disk images, bootloader config

/dev
character, block, major / minor

/etc
Global config files

/home
Users' directories - dot files and dot folders for configs

/lib
Most rudimentary libraries and firmware

/lost+found
Where damaged files go after fsck

/media
Where removable media is often automounted

/mnt
Like media

/opt
Optional third-party software

/proc
A glimpse inside the brain of the kernel

/root
The root user's home directory

/sbin
Most rudimentary super user binaries

/sys
Augments /proc

/tmp
World writable, temporary storage

/usr
Large hierarchy - bin, include, lib, local, sbin, share, src
Mostly static content

/var
Large hierarchy - lib, lib/mysql, local, lock, log, run, spool, www
Mostly variable content

References:
http://tldp.org/LDP/Linux-Filesystem-Hierarchy/html/
http://en.wikipedia.org/wiki/Unix_directory_structure
http://fedoraproject.org/wiki/Features/UsrMove (adopted by many distros)

Interesting files in /etc

fstab - Defines default mount points (man fstab)
inittab - Defines default runlevel
passwd, group, shadow, gshadow (covered in User Accounts lecture)
systemd/ - systemd related configs
profile, bashrc - Defines the environment by setting env variables
bash_completion.d/ - Additional tab completion for bash-completion package
resolv.conf - Specifies the DNS servers (man resolv.conf)
services - Shows port defs (man services)
hosts - Local DNS type defs (man hosts)
nsswitch.conf - Lookup order of DNS and other things (man 5 nsswitch.conf)
hostname (hostname-ctl set-hostname kvm-dowdle.localdomain)

Individual user settings are in "dot directories and dot files" inside each user's home directory. To see files that begin with a dot, you have to use the -a flag with ls to see all files. If using a GUI file manager, look for a reference to "hidden" or show hidden.